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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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ROSS D. SNYDER & ASSOCIATES, INC.
115 WILD BASIN RD.
SUITE 107
AUSTIN, TX 78746

EXAMINER	
DANG, KHANH NMN	

ART UNIT	PAPER NUMBER
2181	5

DATE MAILED: 07/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/770,996	WARE, FREDERICK A.	
	Examiner	Art Unit	
	Khanh Dang	2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 10-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 10, line 3, "said driver circuit" lacks antecedent basis. In claim 16, the essential structural cooperative relationships between the "circuit" and other recited elements in the claims have been omitted, such omission amounting to a gap between the necessary structural connections. MPEP 2172.01.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-9, 17-23, 33-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Coyle et al.

It is first noted that similar claims will be grouped together to avoid repetition in explanation.

As broadly drafted, these claims do not define any structure/step that differs from Coyle et al. With regard to claims 6, 9, Coyle et al. discloses a system providing simultaneous bidirectional signaling using a bus topology, the system comprising: a first device (18/20 and SBI0 or MCU22, for example) operably coupled to a bus (SB12); a second device (IOP 1 or MEM 0) operably coupled to the bus (SB12), the first device (18/20 and SBI0 or MCU22) transmitting a first portion of a first set of data to the second device (IOP 1 or MEM 0) and the second device (IOP 1 or MEM 0) transmitting a second portion of the first set of data to the first device (18/20 and SBI0 or MCU22) simultaneously during a first exchange slot (slot position); and a third device (IOP2 or MEM 1, for example) operably coupled to the bus (SB12), the first device (18/20 and SBI0 or MCU22) transmitting a first portion of a second set of data to the third device (SBI2 or MEM 1, for example) and the third device (SBI2 or MEM 1, for example) transmitting a second portion of the second set of data to the first device (18/20 and SBI0 or MCU22, for example) simultaneously during a second exchange slot. With regard to claim 7, it is clear that there's always a delay in memory access. With regard to claim 8, it is clear that in Coyle et al., due to simultaneous transferring and buffers the so-called "turnaround delay" is less than twice an end-to end propagation delay of the bus. With regard to claim 9, as explained above, the so-called "first device" and "second device" can be "memory controller" and "memory device." With regard to claims 1-5, one using the device of Coyle et al. would have performed the same steps set forth in

claims 1-5. With regard to claims 17-23, the system of Coyle et al., as explained above, is also a "memory system." With regard to claims 33-38, one using the system of Coyle et al. would have performed the same steps set forth in claims 33-38. See above explanation regarding claims 1-9. With regard to claim 39, see explanation regarding claims 1-9. Also note that the MCU22, as in any MCU, includes the so-called "scheduler."

Claims 10-16, 24-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Tamura et al.

It is first noted that similar claims will be grouped together to avoid repetition in explanation. It is also noted that it has been held that the recitation that an element is "capable of" (claim 10, line 3, for example) performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138. It is also been held that the recitation that an element is "adapted to" (claims 14, 15, for example) perform a function is not a positive limitation but only reqrires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

In any event, as broadly drafted, these claims do not define any structure/step that differs from Tamura et al. With regard to claim 10, Tamura et al. discloses a device coupled to a bus in a bus topology capable of simultaneous bi-directional signaling, the device comprising: a driver (201/301, for example) capable of additive signaling, said driver circuit applying transmit signals to the bus (202/302, for example);

a receiver circuit (shown in Fig. 12 or 13, for example) operably coupled to the driver, the receiver circuit capable of effectively subtracting the transmit signals to receive received signals from the bus, the driver and the receiver circuit operating during an exchange slot. With regard to claim 11, it is clear that each memory device is connected to the bus (transmission line) by its own impedance matching. With regard to claim 12, a terminator (761, 762, for example) operably coupled to the driver and the receiver circuit, the terminator providing a controlled termination impedance. With regard to claim 13, the signal transmission system (including buffers, 708, for example) of Tamura et al. is readable as "transmit circuit." With regard to claim 14, the device of Tamura et al also includes buffering stages (buffers 708, for example) or "a plurality of transmit buffers" With regard to claim 15, receiver circuit further comprises comparator (713, for example) operably coupled to the transmitter and to the driver and the receiver. With regard to claim 16, it is clear from the drawins and disclosure of Tamura et al. that the operations of the transmission system and receiver circuit mast be enable by some circuit means during exchange slot. With regard to claims 24-32, one using the memory system of Tamua et al. would have performed the same steps set forth in claims 24-32.

U.S. Patent Nos. 6,457,078 to Magro et al., 5,530,814 to Wong et al., 6,301,629 to Sastri et al., 5,377,328 to Benham, and 6,516,365 to Horowitz et al. are cited as relevant art.

Any inquiry concerning this communication should be directed to Khanh Dang at telephone number 703-308-0211.

Khanh Dang
Primary Exami